

INTRODUCTION

1. AutoZyme Chloride is a reagent set for determination of chloride in serum/plasma based on **Mercuric thiocyanate method**.
2. AutoZyme Chloride is a **single reagent system, ready to use**.
3. AutoZyme Chloride estimates chloride in just **1 minute**.
4. AutoZyme Chloride is **linear** upto 130 mMol/L.
5. AutoZyme Chloride can be used on any **Spectrophotometer, Discrete semiautomated and Automated analyzer**. Programme can be designed for any specific analyzer upon request.
6. The **shelf-life** of AutoZyme Chloride is 15 months.

PRINCIPLE

Chloride reacts with mercuric thiocyanate to give mercuric chloride. The thiocyanate which is released reacts with ferric ions present in the reagent to form ferric thiocyanate which is directly proportional to chloride present in serum/plasma & can be measured at 510 nm.(500 - 520 nm.).

PREPARATION OF WORKING SOLUTION

The reagent is ready to use.

REAGENT STORAGE & STABILITY

The reagents are for *in vitro* diagnostic use.

Thiocyanate reagent and standard should be stored at temperature indicated on the bottle label.

COMPONENTS & CONCENTRATION OF WORKING SOLUTION

The following components are present:

Component	Concentration
• Mercuric thiocyanate	2.0 mMol / L
• Mercuric chloride	0.8 mMol / L
• Ferric nitrate	20.0 mMol / L
• Nitric acid	45.0 mMol / L
• Stabilizers, surface active agent and inactive ingredients	

SPECIMEN COLLECTION & PRESERVATION

Blood should be collected in a clean dry container. Serum or plasma should be separated from cells as early as possible (within 30 minutes). Neatly separated serum or plasma should be used.
Chloride is stable for 7 days in neatly separated serum/plasma at 2°-8°C.

PROCEDURE

- Reaction Type End-Point
- Reaction Time 1 min. at R. T.
- Wavelength 510 nm (500 - 520 nm.)
- Zero setting with Reagent Blank
- Blank absorbance limit < 0.200 Abs.
- Sample Volume 0.01 mL. (10 µL)
- Reagent Volume 1.0 mL
- Standard concentration 100 mMol/L
- Linearity 130 mMol/L

Manual assay procedure

Perform the assay as given below:

1.0 mL procedure

	Serum / Plasma	Standard	Blank
	0.01 mL.	0.01 mL.	--
Thiocyanate reagent	1.0 mL.	1.0 mL.	1.0 mL.

Incubation

Incubate the assay mixture for 1 minute at room temperature. After completion of incubation period measure the absorbance against blank at 510 nm. Final colour is stable for one hour if not exposed to direct light.

Calculation

$$\text{Chloride in mMol/L} = \frac{\text{Absorbance of sample}}{\text{Absorbance of standard}} \times 100$$

NOTE :

The specimen to reagent ratio can be altered proportionately without affecting the results.

EXPECTED VALUES

Expected value : 98 - 107 mMol / L

